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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES

Applicant	:	Borden, George R.	Group Art Unit	:	2173
Serial No.	:	10/627,345	Examiner	:	Roswell, Michael
Filed	:	July 25, 2003	Attorney Docket	:	KLR/7146.0153
Customer No.	:	55648	Confirmation No.	:	2320
Title	:	AURAL USER INTERFACE			

APPELLANT'S REPLY BRIEF

Chernoff, Vilhauer, McClung, and Stenzel, L.L.P.
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May 8, 2007

Mail Stop APPEAL BRIEF-PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

BACKGROUND

This brief is in furtherance of the Notice of Appeal, filed in this case on September 13, 2006, and in reply to the Examiner's ANSWER mailed on March 8, 2007.

STATUS OF CLAIMS

A. TOTAL NUMBER OF CLAIMS IN THE APPLICATION

There are 20 claims currently pending in the application.

B. STATUS OF ALL CLAIMS

Claims canceled: 1-10

Claims withdrawn: None

Claims pending: 11-30

Claims allowed: None

Claims objected to: None

Claims rejected: 11-30

C. CLAIMS ON APPEAL

Claims 11-30 are on appeal.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The grounds of rejection presented for review are: (1) whether claims 11, 12, 15, 16, 19-22, 25, 26, 29, and 30 are unpatentable under 35 U.S.C. §102(a) as being obvious over the combination of Vallone et al., U. S. Patent No. 6,642,939 (hereinafter Vallone) in view of Peterson et al., U.S. Patent No. 5,652,714 (hereinafter Peterson), and IBM Research Disclosure Number 41878, cited in the Examiner's office action dated July 25, 2006 (hereinafter IBM-41878); (2) whether claims 13, 14, 23, and 24 are unpatentable under 35 U.S.C. §103(a) over the combination of Vallone in view of Petersen and IBM-41878, and in further view of Auflick et al., U.S. Patent No. 6,820,238 (hereinafter Auflick); and (3) whether claims 17, 18, 27, and 28 are unpatentable under 35 U.S.C. §103(a) over the combination of Vallone, Peterson, IBM-41878, and in further view of McKiel Jr., U.S. Patent No. 5,287,102.

ARGUMENT

Each of Applicant's claims include a limitation describing a feature by which a hearing impaired individual, when scrolling through a hierarchical list of data, can determine the relative size of the list by the range of frequency in a tone heard, as the list is scrolled through. Thus, for example, independent claim 11 includes the limitation of a "frequency *range* associated with said first aural signal that *is dependent on the size of the data set* comprising the hierarchical set of data." Each of the Examiner's respective rejections of claims 11-30 are premised upon the Examiner's contention that IBM-41878 discloses this feature. It does not, and applicant has discussed in detail why the feature is not present in the invention disclosure of IBM-41878.

In the Examiner's answer, the Examiner states that:

> it is apparent that *since the IBM-41878 reference fails to teach higher and lower frequency bounds* in relation to the content size, Applicant believes the reference fails to teach a frequency range . . . dependent on the size of the data set. As is well known in mathematics, a range is the "set of all values attained by a given function throughout its domain." The Examiner contends that since the rate of change of the frequency varies based in the relative size of the total content, in scrolling through a large data set and a small data set a user would not hear the same set of tones.

See Examiner's answer at pp. 5-6. The Examiner appears to be mistaken in several respects.

First, the IBM-41878 reference expressly indicates that the frequency range associated with scrollable content has fixed upper and lower bounds. For example, IBM-41878 states not only that the "audio feedback mechanism is an audio tone which varies over a *given* octave range as the content area is scrolled" (emphasis added), but also that "different octave or octave ranges [are used] in different HTML frames" so that, if a user has multiple browsers open simultaneously, a user may distinguish between the frames being scrolled by the octave heard. Thus, IBM-41878 clearly indicates that the "range" of frequencies heard when scrolling through a window is predetermined, independently of the size of the data set included.

Second, IBM-41878 states that the

> tone's frequency either rises or falls depending on the direction of the scroll operation, and also depends on the current view port position versus the entire scrollable area . . . The rate of change of frequency is governed by the *relative* size of the total content contained within the scroll area *compared to* the scroll view port, *and* the relative position within the area[that] is being scrolled. This is the *audio equivalent to the visual feedback generated by the scroll bar slider* which indicates one's current position within a large (scrollable) content area.

Therefore, not only is the range, or outer boundaries, of the frequencies heard predetermined, but the number of incremental steps heard within that range does not depend on the size of the data set itself, but the *relative* size of the data set compared to the size of the view port window.

More fundamentally, under the Examiner's asserted combination, there is neither the disclosure of, nor motivation for, the claimed "second aural signal associated with said second input *having a second characteristic audibly different than said first audio characteristic* . . . ." The Examiner contends that this limitation is disclosed by Peterson, U.S. Patent No. 5,652,714 at col. 27 lines 31-35 and 43-52. The Examiner misreads these passages of Peterson. That reference discloses a software tool capable of editing transitions between "states" in interactive multimedia presentations. For example, one multimedia presentation may display an image of a dog in two states: a first state sitting and a second state standing. Peterson also indicates that the multimedia presentation may include "transitions" between the states, i.e. in the foregoing example, a series of frames showing the dog rising from a sitting position when moving from state 1 to state 2, or a separate series of frames showing the dog sitting from a standing position when moving from state 2 to state 1. Peterson's software tool has a window, shown in FIG. 22 allowing a user display the transitions by moving between the states after pressing an appropriate one of "return to previous state" button or "a "transit to next state" button.

In the passage cited by the Examiner, Peterson discloses that "the playback of a transition includes the transient event(s) associated with the transition. For example, *if* a sound is

associated *with the transition*, then the sound is played in substantially the same way as it would be played in the user's view window."(emphasis added). Thus, Peterson is merely indicating that, if the transition between the dog sitting and standing includes the dog barking, then when a user of the editing software presses the "transit to next state" button from state 1, the sound of the dog barking will be heard. The Examiner, however, misinterprets this passage as disclosing that the sound is associated with the *user's act* of pressing the button, i.e. the sound is representative of forward navigation from a first arbitrary state 1 to an incrementally next second state. *See* Examiner's Answer at p. 4 ("Peterson teaches assigning sounds to 'next state' and 'previous state' tools at col. 27 lines 31-35 and lines 43-45.") Obviously, this is incorrect; the sound of a dog barking is not representative of a user pressing a "next" or "previous" state button, but is instead representative only of the *unique* transition between two *particular* states, or data points in a sequence. Thus, contrary to the Examiner's assertion, Peterson fails to disclose using different aural signals to reflect forward/backwards (or upwards/downwards) navigation through a hierarchical sequence of data.

Therefore, the cited prior art fails to disclose either of the limitations of "a second aural signal associated with said second input having a second characteristic audibly different than said first audio characteristic" and frequency ranges associated with first and second aural signals respectively dependent on the size of the data set comprising the hierarchical set of data. Therefore, each of claims 11-30 patentably distinguish over the cited prior art, and the Examiner's respective rejections of these claims should be reversed.

CONCLUSION

The Examiner's respective rejections of claims 11-30 should be reversed, and the claims should be found patentable.

Respectfully submitted,

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PTO/SB/21 (09-04)
Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission	9

Application Number	10/627,345
Filing Date	July 25, 2003
First Named Inventor	George R. Borden, IV
Art Unit	2173
Examiner Name	Michael Roswell
Attorney Docket Number	7146.0153/SLA1182

ENCLOSURES *(check all that apply)*

- ☐ Fee Transmittal Form
  - ☐ Fee Attached
- ☐ Amendment / Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Reply to Missing Parts/ Incomplete Application
  - ☐ Reply to Missing Parts under 37 CFR1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s) _____
  - ☐ Landscape Table on CD
- ☐ After Allowance Communication to TC
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☒ Appeal Communication to TC (**Appeal Notice, Brief, Reply Brief**)
- ☐ Proprietary Information
- ☐ Status Letter
- ☒ Other Enclosure(s) *(please identify below)*:

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Remarks

The Commissioner is hereby authorized to charge Deposit Account Number 03-1550 for any underpayments or to credit any overpayments. A duplicate of this form is enclosed.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

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Signature			
Printed Name	Kurt Rohlfs		
Date	May 8, 2007	Reg. No.	54,405

CERTIFICATE OF TRANSMISSION/MAILING

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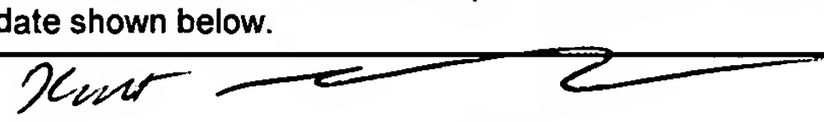
Signature			
Typed or printed name	Kurt Rohlfs	Date	May 8, 2007